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NOTE BY THE SECRETARY-GENERAL

At the request of the Chairman of the Security Council Committee established by resolution 661 (1990) concerning the situation between Iraq and Kuwait, I have the honour to bring to the attention of all States the attached report of the WHO/UNICEF Special Mission to Iraq.

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WHO/UNICEF SPECIAL MISSION TO IRAQ

February 1991

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(ONE to EIGHT)

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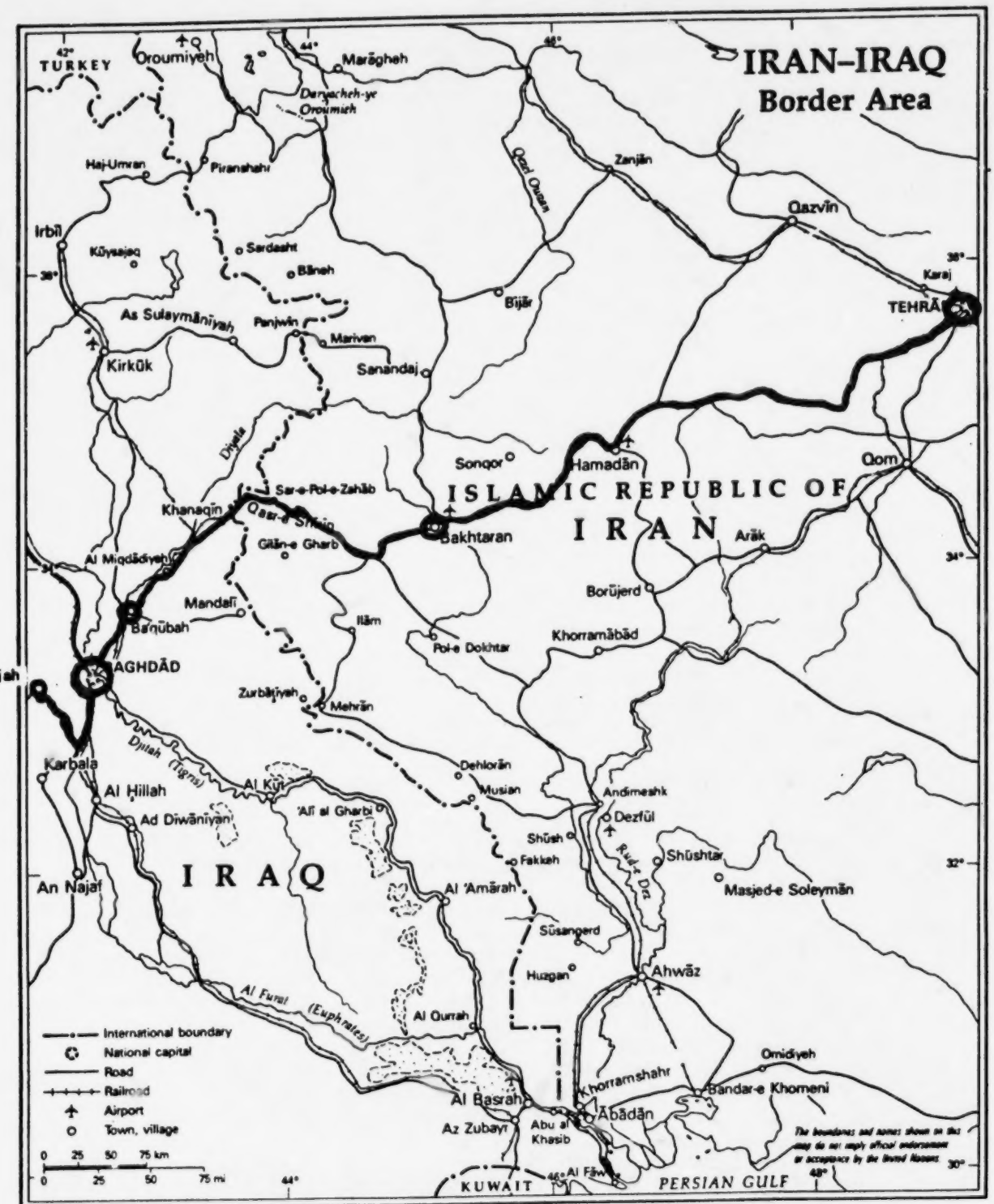

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JOINT WHO/UNICEF TEAM REPORT
A VISIT TO IRAQ, FEB 16-21, 1991

I. Background & Overview

On Saturday morning, 16 Feb 1991, a seven-person joint WHO/UNICEF mission to Iraq crossed the border at Khosravi/Munzaria by road from Tehran, bringing with it a 12-truck convoy carrying 54 tons of basic medical and health supplies.

The mission's broad mandate, set out by the UN Secretary General in his press statement Feb. 6, was "to deliver a shipment of emergency medical supplies to assist in the care of children and mothers, and to ascertain essential health needs". Under this mandate, the joint mission was to look at immediate needs for further medical supplies; for protection against communicable diseases; at the status of supplies and sanitation; and at other health needs for children and mothers. The team's conclusions and recommendations were to be delivered, respectively, to the Director General of WHO and the Executive Director of UNICEF.

Prior to the mission, the Secretary-General had informed the Security Council Committee Established by Resolution 661 (1990), which took note of his intention to send the team without objection. The mission's mandate fell fell within the spirit of the provision of the Geneva Convention of 1949, the UN Convention on the Rights of the Child and the World Summit for Children.

This report emerges from that mandate, and is the joint product of the mission's four UNICEF and three WHO team members. It covers the five days that the team spent in Iraq, and summarizes the observations and recommendations of its members.

After crossing and clearing Iranian/Iraqi border formalities at Khosravi/Munzaria on Feb. 16, the team left the truck convoy for off-loading on the Iraqi side and travelled southward on the main Baghdad highway to Baquba together with a welcoming delegation of Ministry of Health officials, who had brought a small bus to the border for the trip. In Baquba the group lunched with the district health director and discussed storage arrangements with him, since it was at Baquba, 55 kilometers from Baghdad and out of the line of bombardment, that the Ministry of Health had planned to store the supplies brought in. Baquba appears to be the Iraqi government's main health supply distribution point. ICRC's medical materials are also stored there.

From Baquba, the group travelled directly to Baghdad, dropping the Ministry of Health officials at their homes and arriving at 4.00 p.m. at the Al-Rasheed Hotel, which was to be the home base of the WHO/UNICEF team through its visit.

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The methodology used by the team from the start was observation- oriented and pragmatic. Daylight hours were used for field trips, meetings, and visits, since the lack of electricity put a blackout on virtually all movements between 5.00 p.m and 6.00 a.m. To maximize coverage, the team divided itself most days into three units -- one of three persons, covering medical supplies and vaccine needs; a second of three persons, covering communicable diseases, nutrition, the operation of the public health system, and the situation of children and mothers; and the third, a one-person unit, covering drinking water and sanitation. All seven team members participated in broad-purpose meetings and visits. The full team also came together for sharing and de-briefing twice a day.

Throughout the mission, the team was in regular contact with three ministries--Health, Labor and Social Welfare, and External Affairs -- as well as the Mayor of Baghdad. The government gave the mission broad latitude in its movements, and set no substantive restrictions. Officials accompanied mission members on most of their visits. Trips and visits were allowed to continue despite daylight bombardments. The team members basically set their own schedules and itineraries.

The days' activities tended to be an interweave of visits to ministry offices, large and small health facilities (urban, peri-urban and rural), homes, informal water-collection points (the Tigris river, ditches, irrigation canals), markets, water and sewage installations, and medical and vaccine stores. One day was spent outside Baghdad, on a trip to Falluja and points along the way.

Aside from daily coordination meetings in ministry offices, there were meetings with four high Government officials -- the Minister of Health, the Minister of Labor and Social Welfare, the Deputy Minister of Foreign Affairs (H.E. Nizar Hamdoon), and the Mayor of Baghdad.

The mission found in Baghdad that normal life had come almost to a halt. The city's citizens now spend much of their time in family support preoccupations, searching for food, trying to find water, and improvising cooking and heating amidst an acute shortage of all kinds of fuel. Baghdad has no public electricity, no telephones, no gasoline for civilian vehicles, and less than 5% of its normal water supply. None of its water treatment plants are functioning. Toilets go unflushed, and unpumped raw sewage is backing up and overflowing in residential areas. Basic food items are scarce; rice and sugar are increasingly difficult to find. Most basic food items that are available are expensive. Meat is $ 36 per kilo -- this in a society where $ 300 is an

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average monthly urban wage. Homes have no refrigeration for the preservation of food. Bottled gas for cooking and heating is so hard to come by that sales of it set off near stampedes.

A lack of heating fuel has left homes and public buildings so cold that the writers of this report have worn overcoats, sweaters, and scarves to all visits and meetings. Conditions in rural areas and other cities -- where electricity, water and fuel are also absent -- are said to be equally bad, and Basra is reported to be worse.

These conditions appear to have had a heavy impact on public health and the quality of life of children and mothers in Baghdad, whose population is a quarter of that of all of Iraq, and in which a single large popular quarter, Saddam City, has 40,000 inhabitants per square kilometer.

At this writing, the single most urgent health threat, to Baghdad and the country, is that of waterborne epidemics that could soon result from increasingly widespread public use of the Tigris river and other heavily polluted bodies of water for drinking. Free-lance tank trunks are already selling water taken straight from the Tigris in urban neighborhoods. Radio warnings to boil water (there is no television) are largely unheeded, since the hard-pressed population is using scarce fuel for other purposes.

A main concern of the team was the need to assure that the supplies it delivered would be distributed evenly, and according to need, to all civilian populations under Iraqi Government administration -- including Kuwait. A plan to guide this distribution was agreed upon with the MOH, and is being monitored on the ground by UNICEF team members who remained in Baghdad after the mission completed its stay .

In another distribution-related context, the team was aware that the timing of shipment of a number of the supply items recommended in this report may need to be delayed until the overall situation permits.

The drinking water and sanitation threat spelled out above is one of several central problems that the remainder of this report will take up. The following sections will address 1) The Situation of Women & Children in Baghdad, 2) The Situation of the Health Services, 3) Communicable Diseases, 4) Essential Drug and Vaccine Needs, and 5) Water & Sanitation. Each section will present a summary sectoral picture, outline problems and needs, and suggest actions to be taken.

II The Situation of Women and Children in Baghdad

The situation of women and children is severely affected by the general conditions described above. The lack of fuel and electricity at the household level has caused great strains, especially on food preparation. The team visited families at home, observed the improvised stoves, and saw firewood collected on the streets of Baghdad. Bread is baked at home on improvised ovens. Food preparation is much more time-consuming than before the crisis, and food preservation is impossible due to lack of electricity for refrigeration.

Sufficient water for basic needs is not available in most homes, and when available it is in short supply. The collection of water from rivers and the search for fuel put a great strain on women.

All children are at home, as schools have been closed since the start of the bombardment. The team was repeatedly informed about, and observed, children's fear of being left alone. Women bear the burden of these additional care needs.

Essential commodities are rationed. An official ration of rice, flour, sugar, cooking oil, tea and soap is provided at low cost. The present ration provides an estimated 750 to 1000 calories per day, irrespective of age. Children under one year of age receive, in addition, two tins of 450 grams of powdered milk per month. This is 30 grams per day.

It was noted that due to limited supplies of infant formula, the milk ration consists often of full cream milk powder, which is unsuitable for babies. Diarrhoea in small children was reported as a consequence.

The ration of 750-1,000 calories available at present is less than half the daily requirement of a five-year old child, or less than one-third of the requirement of a pregnant woman. This is obviously not enough for subsistence. The diet must be supplemented by purchases from the market.

The team visited local markets and shops to ascertain what kinds of food are available and at which cost. Families were interviewed about their food intake, both from rations and purchases. At present, fruits, vegetables, potatoes, dates, dried beans and meat are available. Families report that they rely heavily on potatoes and such vegetables as tomatoes to supplement their rations. Prices are, however, prohibitive.

The only high-energy food source is dates. Cooking oil is unavailable on the open market. The official ration contains 7-10 grams of cooking fat per person per day.

The quality of the foods now available on the market is low and deteriorating. Transport problems limit availability. In the near future the season for vegetable will be over. Storage is not possible.

At present, it appears that the amount of food the average family is able to purchase, combined with the government's ration, may give each person something close to the daily minimum calorie requirement.

The team is convinced that in the near future, that is a month or less from now, the gap will widen as purchasable goods will rapidly become unavailable. The team saw strong indications of this decrease in availability during the five days it was in Baghdad.

Nutrition of Children

The general food situation has particularly severe consequences in the case of children. Children are at present receiving a diet that is very different from what they are used to, both in quality and in quantity. The available rations are bulky staples such as rice and wheat, as are the foods available on the market, such as potatoes. Energy-dense foods like oil and sugar are scarce. Iraqi infants are traditionally kept on a milk diet for several months, with the introduction of solid foods late in the first year.

Reports from before the war give evidence that most Iraqi mothers have customarily breastfed for a very short time. Artificial feeding is introduced right from the start. The team was repeatedly told that small babies are now given rice and water and orange juice when milk is unavailable. Mothers do not have the knowledge to prepare the necessary and proper diet with the ration and other foods available. Breasfeeding failure was reported by many health staff interviewed, due to the stress and anxiety caused by the bombing.

The current high incidence of diarrhoea and upper respiratory tract infections result in an increased need for food. At the same time, the child's appetite is reduced by these illnesses, and depressed further by the anxiety and fear noticeable in many children. Bed-wetting and sleeplessness were reported. All these mechanisms together lay the foundation for malnutrition, sooner rather than later.

Iraq has no evidence of malnutrition from past records, although accurate data is scarce. The team did not yet see malnutrition, but prodromal symptoms like listless behaviour was observed in some children seen by the team, suggesting conservation of energy. Weight-loss was reported by health staff interviewed and by mothers. This could not be substantiated by records, as no growth monitoring is carried out at present. The increased incidence of diarrhoea, coupled with food shortages, will certainly result in outright malnutrition, specially among one-to-three-year-olds, in the near future.

Given the difficulty of assessing present food intake or supplies, it is not easy to make a reliable estimate of additional needs for young children and pregnant women. A very rough estimate on the immediate needs was made by the team on the basis of the following assumptions:

- The present population of Iraq is 18 million. Of these 4%, (770,000) are children below one year of age. Infant formula will be needed for the children under 4-6 months only.

- Pregnant women will also number an estimated 770,000.

- Children aged 0-5 years will be an estimated 20% of total population, and of those the 1-3 year age group can be estimated to number 2,500,000.

- A period of 30 days is arbitrarily chosen for the first phase. Within this period it will be necessary to undertake a more detailed assessment of the situation in the country.

- Quantities are expressed for infant formula and in rations for other supplements. The kind of supplements available will determine costs.

The mission recommends that an appropriate high energy/protein food ration be provided to these vulnerable groups for an initial period of 30 days. During this time it will be necessary to reassess the situation in order to determine any changes in the food availability and the nutritional status of the population.

Growing from these needs, the recommended short term programmatic actions are:

(1) A resumed supply of infant formula for children under four months, as detailed above.

(2) The promotion of breastfeeding.

(3) The development and promotion of a weaning food, based on the commodities presently available. A cereal-legume mixture mixed with dates could be envisaged.

(4) Social mobilization of all population groups and religious and political leaders, to support the promotion of breastfeeding and appropriate weaning foods.

(5) Resumed growth and monitoring of all children visiting health facilities, so as to monitor the nutrition situation.

III The Situation of the Health Services

Disruption of routine health services was observed by the team at all levels. A main cause of this is the lack of private or public transport, tied to the non-availability of vehicle fuel; professional and para-medical staff regularly fail to come to work because there is no way to get there. Those who do come often arrive by foot or bicycle. On average, the health centers visited by the team operate at a third of their total manpower, with each doctor coming to the center once every three days.

As a result, several of the usual services have been stopped or severely curtailed. Primary care and preventive activities have suffered the most. Antenatal care, MCH clinics, and growth monitoring have ceased. Laboratory services in Baghdad health centers are closed, including those for pregnant women such as blood sugar and albumine, as well as haemoglobin tests. The team was told that the same conditions obtained throughout the country.

Before the war, the majority of urban women delivered in hospitals. In today's war circumstances, hospital deliveries are growing more and more improbable, especially at night. The great majority of deliveries now take place at home, aided by traditional birth attendants wherever possible. In a visit to a rural health center catering to 65,000 people, the team learned that more than 70 per cent of deliveries now take place at home, compared to 47 per cent before the war.

At the center of the health system, further disarray has come from the dispersal of all staff, including the Minister, from the Health Ministry after the building was put out of operation. Staff from the Ministry have now been reassigned to several improvised locations in Baghdad. This has cut contact among Ministry departments and services to a minimum, and has created constant difficulties in communication and coordination.

The immunization of children stopped completely at the start of the war when electricity was cut. All vaccines were sent back to generator-operated central stores and hospitals. Only in the few days prior to the mission's visit had some centers resumed immunization one day per week, using cold boxes and vaccine carriers. However, not enough vaccines are available. The team observed up to 20 children in one health center who were sent away for lack of vaccines. Booster doses and the third shots of DPT and polio have been stopped in order to conserve supplies.

The team observed a serious shortage of syringes. It was reported that syringes were being reused after boiling, if fuel was available, or were cleaned with spirit, introducing a new dimension of risk of hepatitis B and other infections.

The team looked into prescription practices, and observed that only a day's dose of the doctor's prescription is issued at a time. Many women and children are not able to come back every day to complete the treatment. The danger of introducing resistance to antibiotics due to this non-compliance cannot be over emphasized. Treatment cannot be effective under these circumstances.

The shortage of medical staff and medicine, the lack of continuity of care, and the fear of going outside all combined to reduce attendance and render the primary health care system ineffectual.

IV. Communicable Diseases

All the technical services of the Ministry of Health have been disrupted, but none more severely than epidemiological surveillance and the reporting of communicable diseases. These have practically ceased. Laboratory services in Baghdad have been cut back almost to zero. No information has been available since September, 1990 on communicable diseases that were routinely reported by the health services up to that date.

However, as the team reviewed the registers of health facilities visited during the mission, it became clear that the incidence of diarrhoeal diseases reported in these centres had increased fourfold over expected levels since the war began, and that the incidence of acute respiratory infections has shown a very similar upward trend.

Since such communicable diseases as typhoid, meningitis, measles, poliomyelitis, hepatitis A, and malaria are endemic in Iraq, the present conditions of contaminated main water supply and untreated, backed-up sewage have set the stage for the onset of some of these diseases in epidemic proportions. No cases of cholera, typhoid, or meningitis have been officially reported to date, but the danger is real and increasingly present. This situation is compounded by the fact that the MOH is not at present in a position to respond to any epidemic.

The team urged the Ministry to resume immediately some form of monitoring, sentinel on otherwise, of the more serious communicable diseases, and accepted a list of laboratory reagents submitted by the Ministry.

It is recommended that supplies for the control of cholera and meningococcal meningitis be procured and prepositioned in Iran for immediate shipment to Iraq.

V. Essential Drugs and Vaccine Needs

Essential Drugs

Iraq's health situation has been exacerbated by a critical shortage of essential drugs and medical supplies. The stoppage of industrial production, the absence of raw materials, and the lack of electricity have also knocked out the 25 per cent of national drug and medical needs that were met by local production before the crisis. A further loss has been the cutting off of the five per cent of national needs that were met by imports from Jordan.

Visits by the team to the national drug and medical warehouses in Baghdad, along with reports and statistics provided by procurement officials of the Ministry of Health, show that Iraq's civilian reserves have been reduced to one-sixth their normal level-- that is, to a point at which an unevenly depleted three-month supply of basic drugs exists at this writing.

During its mission, the team visited a number of health centers whose pharmacies lacked virtually all essential drugs, including antibiotics.

The production of disposable plastic bags for intravenous infusions, as well as disposable syringes, has been brought to a halt. These are even more needed at a time when sterilization cannot be done for lack of fuel and electricity.

Recommendation for proposed supplies of essential drugs have been prepared by the team and will be reviewed at their respective headquarters.

Vaccines (EPI)

The Iraqi national vaccination programme has been essentially stopped by the lack of electricity needed to protect vaccines, and the inability to import them.

Added to this, the lack of fuel for transportation greatly limits the possibility of carrying vaccines from the central vaccine store to the peripheral health centres, while the production of ice appears to be limited and does not suffice.

Due to the pre-crisis success of the Iraqi EPI, there is still a great demand for vaccination. But the number of vaccination days has been reduced from a daily schedule to one day a week, due to shortages.

A new vaccine supply system was discussed by the team and MOH officials. Under this radical alternative plan, vaccines would be flown to Tehran and transported to Baghdad by road, possibly using UNICEF drivers and some of the seven refrigerated trucks ordered last year by UNICEF for the MOH, but held back by the embargo.

The new plan would see three or four new vehicles supplementing the present available MOH vehicles, to take vaccines in cold boxes from the Baquba stores to outlying governorates and districts. There, cold storage facilities, based on small generator-powered ice-lining refrigerators and freezers, would hold the vaccines for administration in carefully-monitored batches.

UNICEF Baghdad has on order 250 cold boxes that could not be delivered due to the situation. These cold boxes would be most useful in the new system, and it is suggested they be shipped to Baghdad to be used under UNICEF supervision. Ice making capacity has to be evaluated. At this stage it is estimated that at least 18-20 ice making freezers should be supplied for running the cold chain.

VI. Water and Sanitation

The mission gave high priority to its inspection of Baghdad's water and sanitation situation, and saw a grim picture. If quick intervention does not take place, the Iraqi population faces the prospect of epidemics. Diarrhoeal rates are already four times their normal level.

An in-depth assessment was carried out for Baghdad city. Interviews and discussion took place at the MOH Department of Communicable Diseases, from which two doctors and two engineers accompanied us to the Water Authority Directorate. Here the team discussed with the Director the obstacles now confronting water supply and sanitation. Field trips took place to the April 7 water treatment station, where the full current process of treatment was followed and observed. There was then a tour with network maintenance engineers to observe damages to pipes. Further visits took place to the banks of the Tigris river, to see and discuss with people their own water supply improvisations.

For the affected parts of the country, outside Baghdad, information is not yet fully available. Time did not permit visits to those areas. But all reports indicate that the situation faced by Baghdad is similar in other areas, with the most severe conditions in Basra. Wherever the team went, in meetings with the Director of the Baghdad Water Authority, the Directorate of the Ministry of Local Government, and otherwise, there were detailed reports that the whole of the Iraqi drinking water system is in or near collapse.

General Situation

Most of Iraq's population of 18 million enjoyed, before the crisis, an average of over 250 litres per head daily. Baghdad city, with 4.5 million, received up to 500 litres per head. Over 95 percent of this water was the product of river water treatment provided by seven electro mechanical plants, all of which operated with electric power and required chemicals for treatment.

All significant electrical power generating plants in Iraq have now been destroyed, and similarly the refineries and main fuel storage facilities, leaving water treatment plants dead for all but six hours per day of operation on stand-by diesel generators. This necessitates a careful rationing of the systems remaining fuel supply, which will not last more than five more weeks.

The chemical plants which used to supply the main treatment elements, aluminium sulphate (alum) and chlorine, have been destroyed by bombing . Small quantities of alum and chlorine are still stored at treatment plants, and minimal amounts of these dwindling supplies are used for treating the water that is still sent out. On February 21, the chlorine residue in the water was measured at the plant in the team's presence. The level was found to be only 0.75 mg/litres. Double this figure should have been expected even at the end of the water network, where chlorine levels should be diffused to their lowest strength.

Water quality tests, which are usually carried out at the treatment plant laboratories, are much less frequent than before the crisis. There are shortages of the reagents used to carry out chemical tests. Bacteriological tests are not being carried out at all, because the available equipment that performs these tests requires 24 hours of electricity. Hence the water is distributed without knowing its bacteriological characteristics, at a time when treatment levels are markedly sub-standard.

Baghdad City

The city of Baghdad is served by the seven treatment stations mentioned above, each pumping directly into a network of over 6,000 kilometers of pipes. At present, the water supply to the inhabitants is between zero and 15 litres per person daily, with minimum treatment specifications at the stations and insufficient disinfection. The distribution is rationed in an uneven manner, since the rationing operation requires the manual maneuvering of over 20,000 valves. This cannot be performed adequately by the available personnel, who have no fuel to travel about in their few vehicles.

In no sector of the city can water reach higher than the ground level of buildings, due to the weak pressure in the pipes. Some districts of the city receive 3-4 hours of water every three to four days, other districts 3-4 hours every two weeks. During the team's presence at the Water Authority Director's office, people came complaining that they had not received water for 20 days. About one million people receive almost nothing, since their main water feeder pipes have been severely damaged and cannot be repaired for lack of parts. These areas are fed from other ends of the system, with pressure which is barely enough to drive water.

Interrupted pumping inevitably leaves stagnant water in the pipes. This causes further degradation of the originally poor quality of the water.

Intervention

In order to limit the on-going health threats and prevent epidemics, it is proposed to supply the city with 40 liters of water per head per day. In order to achieve that, the following intervention is urgently recommended for Baghdad city. It must be understood that some of the supply items listed below can be provided only when circumstances permit.

. Supply of the necessary fuel to operate stand-by generators for a period of three months.
Qty for 3 months = 1800 tons
Est. cost for 3 months = US $ 540,000

. Supply of alum for three months
Qty for 3 months = 1500 m. tons
Est. cost for 3 months = US $ 525,000

. Supply of chlorine for 3 months
Qty for 3 months = 45 m. tons
Est. cost for 3 months = US $ 22,500

. Supply of necessary collars to repair broken mains. (List attached under Appendix no. 1)
Est. cost US $ 52,920

. Supply of material and laboratory items (List attached under Appendix no. 2)
Est. cost US $ 49,240

. Supply of spare parts for treatment station equipment.
Est. cost US $ 150,000
(List attached Appendix no. 3)

. Estimated Total Cost to support the water supply of Baghdad city for 3 months = US $ 1,339,660

Considering the situation of the whole country, an additional budget of US $ 4,000,000 should be kept in mind as an initial step for three months, until more accurate figures are obtained.

Sanitation

During our five days' stay in Baghdad, members of the team saw that the sanitation status of the city is critically deteriorating. The three main sectors of concern are the following:

- Shortage of water;
- Stoppage of the sewer system;
- Acute decrease of garbage disposal.

The water shortage has been discussed earlier. The garbage disposal system, which depends on a large equipment fleet and labour force, is not addressed in this report. The proposed focus of sanitary intervention at this stage is the sewerage system. Baghdad is a flat city. The sewerage system cannot operate by gravity; therefore sewerage is passed through to the treatment plants by pumping stations (lifting stations) at intervals. There are 252 of these stations, which are electrically operated, about 192 of which have stand-by generators.

If those lifting stations do not operate, the sewage pipes fill up and houses flood with sewage. This is occurring in Baghdad now. Additionally, large pools of sewage are forming due to the overflow of sewage at the pumping pits, creating other health hazards.

Three main problems face the sewerage system.

1. Lack of fuel to operate the stand-by generators.
2. Stoppage of generators due to lack of spare parts.
3. Absence of stand-by generators in 60 stations, meaning that half a million homes cannot flush out their sewage.

The above matter was discussed with the directors of both the Baghdad Water Authority and the Baghdad Sewerage Authority. Visits took place to sites. The team observed the manual operation of the lifting pumps, which requires the constant presence of staff at a time when they are frequently unavailable and have very little transport.

In order to partially contain this problem and keep up operation at a minimum safety level, the following are required:

Enough diesel fuel to operate the lifting pumps, generator, and sewage treatment stations for three months.

Quantity required for three months: 900 m. tons
Estimated cost of diesel for 3 months: US $ 270,000

. A supply of essential spare parts sufficient to repair stopped generators. The list is being prepared and will be ready within a week of this writing.

Estimated figure for this activity: US $ 100,000.

. The supply of four 110 kva generators for mobile use, in order to supply power to the 60 lift pumps which have no stand-by power.

Estimated cost fcr 4 generators: US $ 150,000.

. Estimated total budget for sanitation for three months: US $ 520,000.

In short, the children and mothers of Iraq are living in a very acute water supply situation and in dangerous sanitation conditions, in weather which is now favourably cold, but which will warm to more than 40 degrees in another five or six weeks. Few public services whatsoever are available. Fuel is not existent. Transport services do not function. If nothing is done to remedy water supply and improve sanitation, a catastrophe could beset Iraq.